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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,705	06/21/2001	Tetsujiro Kondo	450101-02649	2532

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EXAMINER

MARIAM, DANIEL G

ART UNIT PAPER NUMBER

2621

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/807,705

Applicant(s)

KONDO ET AL.

Examiner

DANIEL G MARIAM

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-67 is/are rejected.
- 7) ☒ Claim(s) 52 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Translation***

1. The Examiner has used a verbal translation provided by a Japanese translator for the interpretation of Japanese Patent Number: 04--281578. An official translation will be provided with the next Office Action, up on applicants' request.

### ***Claim Objections***

2. Claim 52 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 51. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 5-15, 19-24, 29-39, 43-48, 53-63, and 65-67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For example, independent claim 5 recites the limitation "classifying each pixel existing in the feature region into one of classes". It is unclear what type of classes the limitation "one of classes" supposes to cover and/or whether it provides any indication as to the content of the classes being different or identical. A similar limitation also occurs in independent claims 19, 23, 29, 43, 47, 53, 65, and 66. Please clarify.

Since claims 6-15, 20-22, 24, 30-39, 44-46, 48, 54-63, and 67 depend on the above

identified claims respectively, they are also rejected under 35 U.S.C. 112, second paragraph, for the same reason set forth above for claims 5, 19, 23, 29, 43, 47, 53, 65, and 66

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4, 16-18, 25-28, 40-42, 49-52, and 64 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimada (Japanese Patent No. 04-281578).

With regard to claim 1, Shimada discloses an image processing apparatus (See for example, Fig. 1) comprising: extracting means for extracting a feature region, i.e., feature area, from a region of an object in image, in accordance with a luminance distribution of a plurality of pixels adjacent to a predetermined pixel (See item 13, in Figs. 1 and 3); calculating means for calculating a gravity-center, i.e., centroid, correlation value that shows the correlation between the gravity center of the feature region and the gravity center of the image region, i.e., face area, of the object(See for example, item 104, in Fig. 1; and items 106 and 405, in Figs. 1 and 3 respectively); and determining means for determining an orientation, i.e., direction, of the object from the gravity-center correlation value (See items 107 and 406, in Figs. 1 and 3 respectively).

With regard to claim 2, the image processing apparatus according to claim 1, wherein the extracting means includes: pixel extracting means for extracting a plurality of pixels for detecting a dynamic range from the image region, in accordance with the position of the pixel of the predetermined pixel existing in the image region of the object; dynamic range calculating

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means for calculating the dynamic range of the pixels, and feature region extracting means for extracting the predetermined pixel as a pixel existing in the feature region, when the dynamic range is greater than a predetermined value (See for example, Figs. 1-4).

With regard to claim 3, the image processing apparatus according to claim 1, wherein the determining means determines the orientation of the object, in accordance with the relation information that shows a relation between the gravity-center correlation value and the orientation of the object (See for example, Figs. 1-4).

With regard to claim 4, the image processing apparatus according to claim 1, wherein the calculating means calculates the gravity-center correlation value in accordance with the difference between a position (which corresponds to distance) of the gravity center of the feature region and the position of the gravity center of the image region, i.e., face area, of the object (See the abstract; and Figs. 1-4).

With regard to claim 16, claim 1 substantially encompasses the limitation of this claim, and is rejected the same as claim 1. Thus, arguments analogous to that presented above for claim 1 is equally applicable to claim 16. Applicants' attention is further invited to Figs. 1-4).

Claims 17 and 18 are rejected the same as claims 2 and 4 respectively. Thus, argument analogous to those presented above for claims 2 and 4 are respectively applicable to claims 17 and 18.

Claim 25 is rejected the same as claim 1 except claim 25 is a method claim. Thus, argument similar to that presented above for claim 1 is applicable to claim 25.

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Claims 26, 27, and 28 are rejected the same as claims 2, 3, and 4 respectively, except claims 26, 27, and 28 are directed to method claims. Thus, argument analogous to those presented above for claims 2, 3, and 4 are respectively applicable to claims 26, 27, and 28.

Claim 40 is rejected the same as claim 16 except claim 40 is a method claim. Thus, argument similar to that presented above for claim 16 is applicable to claim 40.

Claims 41 and 42 are rejected the same as claims 17 and 18 respectively, except claims 41 and 42 are directed to method claims. Thus, argument analogous to those presented above for claims 17 and 18 are respectively applicable to claims 41 and 42.

Claim 49 is rejected the same as claim 1. Thus, argument similar to that presented above for claim 1 is equally applicable to claim 49. Claim 49 distinguishes from claim 1 only in that it recites the limitation "a recording medium for storing a computer-controllable program" and Shimada (Figs. 1 and 3) further teaches this feature.

Claims 50 and (51 & 52) are rejected the same as claims 2 and 4 respectively. Thus, argument analogous to those presented above for claims 2 and 4 are respectively applicable to claims 50 and (51 & 52).

Claim 64 is rejected the same as claim 16. Thus, argument similar to that presented above for claim 16 is equally applicable to claim 64. Claim 64 distinguishes from claim 1 only in that it recites the limitation "a recording medium for storing a computer-controllable program" and Shimada (Figs. 1 and 3) further teaches this feature.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Numbers: 5430809, 5828769, 5838839, and 5870494; and a publication to:

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Su, et al. "Face recognition by feature orientation and feature geometry matching" and Hager, et al. "Efficient region tracking with parametric models of geometry and illumination".

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G MARIAM whose telephone number is 703-305-4010. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LEO BOUDREAU can be reached on 703-305-4607. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**DANIEL MARIAM**  
**PRIMARY EXAMINER**

June 30, 2004